UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
KRASNIC, BERNARD

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/699,700	OZAWA, MASAHIRO
	Examiner	Art Unit
	BERNARD KRASNIC	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2009*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 40* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-16 and 40* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
        1.☒ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   The Final Office Action filed by the Examiner on 2/02/2009 has been withdrawn

because the Applicants representative, Ms. WeiWei Stiltner, convinced the Examiner

that the finality was premature [as is discussed in the Examiner's Interview Summary

dated 5/26/2009] only because a premature 101 rejection was issued towards claims 7-

11, and therefore that Final Office Action dated 2/02/2009 will now be considered as a

Non-Final Office Action instead of a Final Office Action. Since the Applicant has filed an

Amendment on 5/04/2009 and a Supplemental Amendment on 5/22/2009 in response

to the Examiner's Office Action dated 2/02/2009, this correspondence now is

considered a Final Office Action.

Response to Arguments

2.   The amendment filed 5/04/2009 and the supplemental amendment filed

5/22/2009 have been entered and made of record.

3.   The application has pending claim(s) 1-16 and 40.

4.   In response to the amendments filed on 5/22/2009:

The "Claim rejections under 35 U.S.C. 101" have been entered and therefore the

Examiner withdraws the rejections under 35 U.S.C. 101.

5.   Applicant's arguments filed 5/22/2009 [and Applicant's arguments also filed

5/04/2009] have been fully considered but they are not persuasive.

The Applicant alleges [5/04/2009], "Claim 1 recites that the selection unit displays

…" in page 20 through "Accordingly, claim 1 of the present application is patentable ..."

in page 22, and states respectively that the prior art references Gentile, Queiroz, Hiroshi

and Litwiller whether considered individually or in combination do not disclose the claim

limitation "the selection unit displays one or more compression methods on the display

for each region, enabling a user to select one of the plurality of compression methods in

accordance with a type of the region from among the plurality of compression methods

and wherein for each type of region, the selection unit displays only compression

methods from compression methods in the plurality of compression methods that are

designated for the type of region" as recited in claim 1. The Examiner disagrees

because the four prior art references in combination do teach such a feature. More

specifically, Gentile discloses separating and extracting different region types such as

text, graphic, and photograph and compressing each different region type with different

compression algorithms specific for the region type and that such a plurality of different

compression algorithms are based on balancing the compression factors of

compression ratio or size, computational complexity or speed, and visual quality or

picture quality (see [e.g.] the rejection of claim 5 in the previous Office Action dated

2/02/2009 at pages 13-19). Queiroz and Hiroshi are used to further teach that text may

be efficiently encoded using standard binary coders such as MMR and JBIG and that

drawing/graph information subject can be coded for example by MH coding or MR

coding and that photograph information subject can be coded using MH coding or MR

coding (see [e.g.] the rejection of claim 5 in the previous Office Action dated 2/02/2009

at pages 13-19) which essentially provides a list of the *only* possible compression

methods from the plurality of compression methods in accordance with each type of

region [text ==> e.g. MMR and JBIG; drawing/graph ==> e.g. MH coding or MR coding;

photograph ==> e.g. MH coding or MR coding]. *Gentile further states then that a*

consultant (166) is used to help in the selection of the compression algorithm (see

Gentile at col. 11 at lines 19-22). Therefore Gentile as modified by Queiroz and Hiroshi

set up a compression environment wherein a plurality of compression methods are

available for each specific text, graphic, and photograph region type [e.g. text region

type encoded using MMR and JBIG coding, drawing/graph region type encoded using

MH or MR coding, and photograph region type encoded using MH or MR coding] and

wherein the particular compression algorithms are determined based on a plurality of

compression modes / factors [balancing the compression factors of 1 - compression

ratio or size, 2 - computational complexity or speed, and 3 - visual quality or picture

quality] *also subject to selection by the consultant.* However, the compression

environment set up by Gentile as modified by Queiroz and Hiroshi does not explicitly

suggest that there is a display enabling a user / consultant to select one of the plurality

of compression methods [e.g. text region type encoded using MMR and JBIG coding,

drawing/graph region type encoded using MH or MR coding, and photograph region

type encoded using MH or MR coding] or compression modes / factors [balancing the

compression factors of 1 - compression ratio or size, 2 - computational complexity or

speed, and 3 - visual quality or picture quality] in accordance with a type of the region /

text, graphic, photograph. The prior art reference Litwiller discloses a display unit that

displays compression choices and having the user [similar to Gentile's consultant]

select on the user touching screen display the compression parameter (see Litwiller,

[0061], [0065], and [0067]). Although Litwiller alone doesn't explicitly suggest a selection

unit displaying one or more compression methods on the display for each region, in

combination the four references Gentile, Queiroz, Hiroshi and Litwiller make such a

limitation obvious; *it would have been obvious for Litwiller to display the* **compression**

environment set up *by Gentile, Queiroz and Hiroshi [which consists of region specific*

compression lists as discussed above] by using Litwiller's ability to display possible

compression parameter choices for selection by the user on the user touch screen.

Therefore it would have been obvious to one of ordinary skill in the art at the time the

invention was made to further modify Gentile, as modified by Queiroz and Hiroshi, using

Litwiller's teachings by including a display unit to Gentile's device/method *in order to*

allow Gentile's [as modified by Queiroz and Hiroshi] compression environment to be

displayed in order to enhance the selection process by allowing the user or consultant

to touch the touch-sensitive display to provide a compression selection (see Litwiller,

[0061], [0065], and [0067]). Therefore the claims are still not in condition for allowance

because they still are not patentably distinguishable over the prior art references.

The Applicant alleges [5/04/2009], "With regard to claims 2-5, the claims have

been amended ..." in page 22 through "Accordingly, claims 2-5 of the present

application are patentable ..." in page 23, and states respectively that the prior art

references do not mention a display on which compression process modes are

displayed. However the Examiner disagrees as discussed above because Gentile as

modified by Queiroz and Hiroshi set up a compression environment wherein a plurality

of compression methods are available for each specific text, graphic, and photograph

region type [text ==> e.g. MMR and JBIG; drawing/graph ==> e.g. MH coding or MR

coding; photograph ==> e.g. MH coding or MR coding] and wherein the particular

compression algorithms are determined based on a plurality of compression modes /

factors [balancing the compression factors of 1 - compression ratio or size, 2 -

computational complexity or speed, and 3 - visual quality or picture quality] also subject

to selection by the consultant and *it would have been obvious for Litwiller to display the*

compression environment set up *by Gentile, Queiroz and Hiroshi [which consists of*

region specific compression lists as discussed above] by using Litwiller's ability to

display possible compression parameter choices for selection by the user on the user

touch screen. Therefore the claims are still not in condition for allowance because they

still are not patentably distinguishable over the prior art references.

The Applicant alleges [5/22/2009], "The Examiner and Applicant's representative

discussed ..." in page 20 through "Applicant's representative further emphasized that

Litwiller ..." in page 21, and states respectively that Gentile's consultant 166 is a

computer-based function and is not based on user's selection and that Litwiller only

discloses displaying possible compression parameter choices for the entire message

instead of displaying them for each region. Firstly based on the broadest claim

interpretation of the claim limitations, the claims never state that the user selection is not

computer based [the Examiner suggests the Applicant amend the claims to either state

-- human-user selection -- or a -- non-computer-based user selection -- for such an

argument to be raised] and further Litwiller discloses having the user [human user]

select on the user touching screen display the compression parameter (see Litwiller,

[0061], [0065], and [0067]). Secondly as discussed above, although Litwiller alone

doesn't explicitly suggest a selection unit displaying one or more compression methods

on the display for each region, in combination the four references Gentile, Queiroz,

Hiroshi and Litwiller make such a limitation obvious; *it would have been obvious for*

Litwiller to display the **compression environment set up** *by Gentile, Queiroz and*

Hiroshi [which consists of region specific compression lists as discussed above] by

using Litwiller's ability to display possible compression parameter choices for selection

by the user on the user touch screen. Therefore it would have been obvious to one of

ordinary skill in the art at the time the invention was made to further modify Gentile, as

modified by Queiroz and Hiroshi, using Litwiller's teachings by including a display unit to

Gentile's device/method *in order to allow Gentile's [as modified by Queiroz and Hiroshi]*

compression environment to be displayed in order to enhance the selection process by

allowing the user or consultant to touch the touch-sensitive display to provide a

compression selection (see Litwiller, [0061], [0065], and [0067]). Therefore the claims

are still not in condition for allowance because they still are not patentably

distinguishable over the prior art references.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

7.   Claims 1-16 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gentile (US 5,949,968, as applied in previous Office Action), in view of Queiroz

("Mixed Raster Content MRC model for compound image compression" – 1998 – vol.

3653, pages 1106-1117, as applied in previous Office Action) and Hiroshi (JP 05-

110737, from Applicant's PTO 1449 – Information Disclosure Statement – IDS, as

applied in previous Office Action), and further in view of Litwiller (US 2003/0132960 A1,

as applied in previous Office Action).

Re Claim 1: Gentile discloses an image processing device / processing apparatus for

output to a visual-output device (see col. 2, lines 4-6), comprising a region extraction

unit / within a processor for separating and extracting a character region / text type, a

graphic region / graphic type and a photograph region / photograph type from image

data / two-dimensional page representation (see Fig. 2, col. 2, lines 26-30); a region

compression unit / within a processor for performing a compression process / different

algorithms for compressing for the image data in each region / different representation

types extracted by said region extraction unit (see col. 2, lines 34-38); a region

synthesis unit / within a processor for synthesizing / stored sequentially or displayed

together the image data of the regions / different types compressed by said region

compression unit (see col. 3, lines 32-38, the compressed data is stored sequentially by

the region which is essentially synthesizing or combining the compression regions, or

the compressed data after being stored sequentially is decompressed and displayed on

a display to the visual-output display as shown in ref. No. 18 or 80 of Fig. 1 and Fig. 3

which is essentially synthesizing or combining the compression regions); and a

compression method selection unit / within a processor for selecting from among a

plurality of compression methods / compression schemes, one of the plurality of

compression methods / selection of compression algorithm scheme for each region /

different types [visually active / graphics or pictures and for visually less active / text

regions] for the compression process to be performed for each region / different types,

wherein the selection unit enables a user / consultant to select one of the plurality of

compression methods / compression algorithm schemes in accordance with a type of

the region / different types among the plurality of compression methods / different

compression algorithm schemes (see Gentile, col. 2, lines 34-38 and 63-63, abstract,

lines 7-14, col. 10, lines 44-58, col. 11, lines 19-32, Gentile teaches selecting one of the

compression mechanisms for each of the regions, according to its regions type, from a

plurality of compression algorithm schemes corresponding to each different region

representation type. Gentile teaches some compression schemes are: one-color

encoding; two-color encoding; run-length encoding; LZW encoding; JPEG encoding;

lossy encoding, lossless encoding; etc. Gentile also teaches the particular compression

algorithm used for each region type is determined based on the compression factors

associated with the particular region type [for example: dependent on what ratio / size,

computational complexity / speed, or visual quality / picture quality is wanted to be

achieved for the particular region, a particular compression scheme from the plurality of

compression schemes is selected]. See Gentile, col. 11, lines 53-65, Gentile teaches

updating the compression scheme for the particular region if the target compression

factors are not achieved therefore showing that plural compression schemes are

available for each particular type of region. See Gentile, col. 11 at lines 19-22 and 37-

40, Gentile discloses a consultant which is used to help in the selection of the

compression algorithm based on [e.g.] compression factors), and wherein for each type

of region, the selection unit contains only compression methods only from compression

methods in the plurality of compression methods that are designated for the type of

region / different types (see Gentile, col. 5, lines 11-25 and col. 10, lines 44-58, Gentile

discusses possible lists or groups [not explicitly as separate lists or groups] of

compression methods for visually active / graphics or pictures and for visually less

active / text regions [Gentile states *some compression schemes* are one-color

encoding, two-color encoding, run-length encoding, subsampling, LZW, and JPEG,

Gentile then also discusses selecting the specific compression method based on the

compression factors at hand]); said region compression unit / within a processor

performing the compression process / different algorithms for compressing for the

image data of each region / different representation types using the compression

method selected / selection of compression algorithms for the region / different types by

said compression method selection unit (see Gentile, col. 2, lines 34-38 and 63-63, abstract, lines 7-14, col. 10, lines 44-58, col. 11, lines 19-32 and 53-65).

However Gentile does not explicitly disclose the possible lists or groups of compression schemes as separate lists or groups for each specific region type [text, graphic, photograph]; a display, and wherein the selection unit only displays one or more compression methods on the display for each region, enabling a user to select one of the plurality of compression methods.

Queiroz discloses *text* is efficiently encoded using standard binary coders such *as MMR and JBIG* (see Queiroz, page 1109, Section 3. Decomposition and compression analysis, paragraph 2, lines 5-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gentile's method by using Queiroz's teachings by including further compression schemes in regard to the specific regions to Gentile's compression schemes in order to more efficiently compress the specific text, graphic, and photograph regions.

However Gentile, as modified by Queiroz, does not explicitly disclose the possible lists or groups of compression schemes as separate lists or groups for each specific region type [graphic, photograph]; a display, and wherein the selection unit only displays one or more compression methods on the display for each region, enabling a user to select one of the plurality of compression methods.

Hiroshi discloses *drawing/graph* information subject can be coded for example by *MH coding or MR coding* and that *photograph* information subject can be coded using *MH coding or MR coding* (see Hiroshi, abstract, CONSTITUTION, lines 5-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Gentile's method, as modified by Queiroz, using Hiroshi's teachings by including further compression schemes in regard to the specific regions to Gentile's compression schemes in order to more efficiently compress the specific text, graphic, and photograph regions.

Although Gentile as modified by Queiroz and Hiroshi set up a compression environment wherein a plurality of compression methods are available for each specific text, graphic, and photograph region type [e.g. text region type encoded using MMR and JBIG coding, drawing/graph region type encoded using MH or MR coding, and photograph region type encoded using MH or MR coding] and wherein the particular compression algorithms are determined based on a plurality of compression modes / factors [balancing the compression factors of 1 - compression ratio or size, 2 - computational complexity or speed, and 3 - visual quality or picture quality] also subject to selection by the consultant, the compression environment set up by Gentile as modified by Queiroz and Hiroshi however does not explicitly suggest that there is a display enabling a user / consultant to select one of the plurality of compression methods [e.g. text region type encoded using MMR and JBIG coding, drawing/graph region type encoded using MH or MR coding, and photograph region type encoded using MH or MR coding].

Litwiller discloses a display unit that displays compression choices and having

the user [similar to Gentile's consultant] select on the user touching screen display the

compression parameter (see Litwiller, [0061], [0065], and [0067]).

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to further modify Gentile, as modified by Quieroz and Hiroshi,

using Litwiller's teachings by including a display unit to Gentile's device/method in order

to allow Gentile's [as modified by Quieroz and Hiroshi] compression environment to be

displayed in order to enhance the selection process by allowing the user or consultant

to touch the touch-sensitive display to provide a compression selection (see Litwiller,

[0061], [0065], and [0067]).

Re Claim 5: Gentile discloses an image processing device / processing apparatus for

output to a visual-output device (see col. 2, lines 4-6), comprising a region extraction

unit / within a processor for separating and extracting a character region / text type, a

graphic region / graphic type and a photograph region / photograph type from image

data / two-dimensional page representation (see Fig. 2, col. 2, lines 26-30); a region

compression unit / within a processor for performing a compression process / different

algorithms for compressing the for image data in each region / different representation

types extracted by said region extraction unit (see col. 2, lines 34-38); a region

synthesis unit / within a processor for synthesizing / stored sequentially or displayed

together the image data of the regions / different types compressed by said region

compression unit (see col. 3, lines 32-38, the compressed data is stored sequentially by

the region which is essentially synthesizing or combining the compression regions, or

the compressed data after being stored sequentially is decompressed and displayed on

a display to the visual-output display as shown in ref. No. 18 or 80 of Fig. 1 or Fig. 3

which is essentially synthesizing or combining the compression regions); and a

compression process mode setting unit / selection of compression algorithms using

compression factors, said compression process mode setting unit contains a plurality of

compression process modes / factors enabling a user / consultant to select one of the

plurality of compression process modes / factors (see col. 2, lines 33-41, the selection

of a plurality of different compression algorithms corresponding to different

representation types with combinations are based on balancing the compression factors

of compression ratio or size, computational complexity or speed and visual quality or

picture quality, col. 11 at lines 19-22 and 37-40, Gentile discloses a consultant which is

used to help in the selection of the compression algorithm based on [e.g.] compression

factors); said region compression unit / within a processor using, when a speed

preference mode / computational complexity is set / compression algorithms based on

computation complexity factor at said compression process mode setting unit, one of a

plurality of compression methods designated for the image data in each region /

different types which exhibits a highest processing speed / low compression complexity

to perform the compression process for the individual region (see col. 2, lines 33-41,

col. 3, lines 5-10, when the selection of compression algorithms for the different

representation types and their combinations is based on computational complexity, a

low computational complexity results in high processing speed while a high

computational complexity results in low processing speed) wherein, for each type of

region / different types, the designated compression method is selected from among the

plurality of compression methods / selection of compression algorithm from different

compression algorithm schemes, wherein each of the plurality of compression methods

is designated for the type of region / different types (see Gentile, col. 2, lines 34-38 and

63-63, abstract, lines 7-14, col. 10, lines 44-58, col. 11, lines 19-32, Gentile teaches

selecting one of the compression mechanisms for each of the regions, according to its

regions type, from a plurality of compression algorithms corresponding to each different

region representation type. Gentile teaches some compression schemes are: one-color

encoding; two-color encoding; run-length encoding; LZW encoding; JPEG encoding;

lossy encoding, lossless encoding; etc. Gentile also teaches <u>the particular compression</u>

<u>algorithm used for each region type is determined based on the compression factors</u>

associated with the particular region type [for example: dependent on what ratio / size,

computational complexity / speed, or visual quality / picture quality is wanted to be

achieved for the particular region, a particular compression scheme from the plurality of

compression schemes is selected]. See Gentile, col. 11, lines 53-65, Gentile teaches

updating the compression scheme for the particular region if the target compression

factors are not achieved therefore showing that plural compression schemes are

available for each particular type of region.) (see Gentile, col. 5, lines 11-25 and col. 10,

lines 44-58, Gentile discusses possible lists or groups [not explicitly as separate lists or

groups] of compression methods for visually active / graphics or pictures and for visually

less active / text regions [Gentile states *some compression schemes* are one-color

encoding, two-color encoding, run-length encoding, subsampling, LZW, and JPEG,

Gentile then also discusses selecting the specific compression method based on the

compression factors at hand]), said region compression unit / within a processor using,

when a picture quality preference mode / visual quality is set / compression algorithms

based on visual quality at said compression process mode setting unit, one of the

plurality of compression methods designated for the image data in each region /

different types which exhibits a least picture quality deterioration / best visual quality to

perform the compression process for the individual region (see col. 2, lines 33-41, col.

3, lines 5-10, when the selection of compression algorithms for the different

representation types and their combinations is based on visual quality, a best visual

quality results in the least picture quality deterioration, a worst visual quality results in

the highest picture quality deterioration), wherein, for each type of region / different

types, the designated compression method is selected from among the plurality of

compression methods / selection of compression algorithm from different compression

algorithm schemes, wherein each of the plurality of compression methods is designated

for the type of region / different types (see Gentile, col. 2, lines 34-38 and 63-63,

abstract, lines 7-14, col. 10, lines 44-58, col. 11, lines 19-32 and lines 53-65, see the

similar discussion above), and said region compression unit / within a processor using,

when a size preference mode / compression ratio is set / compression algorithms based

on the compression ratio factor at said compression process mode setting unit, one of

the plurality of compression methods designated for the image data in each region /

different types which exhibits a highest compression ratio / highest compression ratio to

perform the compression process for the individual region (see col. 2, lines 33-41, col.

3, lines 5-10, when the selection of compression algorithms for the different

representation types and their combinations is based on compression ratio, the highest

compression ratio results in a small data size, the least compression ratio results in a

large data size), wherein, for each type of region / different types, the designated

compression method is selected from among the plurality of compression methods /

selection of compression algorithm from different compression algorithm schemes,

wherein each of the plurality of compression methods is designated for the type of

region / different types (see Gentile, col. 2, lines 34-38 and 63-63, abstract, lines 7-14,

col. 10, lines 44-58, col. 11, lines 19-32 and lines 53-65, see the similar discussion

above).

However Gentile does not explicitly disclose the possible lists or groups of

compression schemes as separate lists or groups for each specific region type [text,

graphic, photograph]; displays a plurality of compression process modes enabling a

user to select one of the plurality of compression modes.

Queiroz discloses *text* is efficiently encoded using standard binary coders such

as *MMR and JBIG* (see Queiroz, page 1109, Section 3. Decomposition and

compression analysis, paragraph 2, lines 5-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify Gentile's method by using Queiroz's teachings

by including further compression schemes in regard to the specific regions to Gentile's

compression schemes in order to more efficiently compress the specific text, graphic, and photograph regions.

However Gentile, as modified by Queiroz, does not explicitly disclose the possible lists or groups of compression schemes as separate lists or groups for each specific region type [graphic, photograph]; displays a plurality of compression process modes enabling a user to select one of the plurality of compression modes.

Hiroshi discloses *drawing/graph* information subject can be coded for example by *MH coding or MR coding* and that *photograph* information subject can be coded using *MH coding or MR coding* (see Hiroshi, abstract, CONSTITUTION, lines 5-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Gentile's method, as modified by Queiroz, using Hiroshi's teachings by including further compression schemes in regard to the specific regions to Gentile's compression schemes in order to more efficiently compress the specific text, graphic, and photograph regions.

Although Gentile as modified by Queiroz and Hiroshi set up a compression environment wherein a plurality of compression methods are available for each specific text, graphic, and photograph region type [e.g. text region type encoded using MMR and JBIG coding, drawing/graph region type encoded using MH or MR coding, and photograph region type encoded using MH or MR coding] and where the particular compression algorithms are determined based on a plurality of compression modes / factors [balancing the compression factors of 1 - compression ratio or size, 2 - computational complexity or speed, and 3 - visual quality or picture quality] also subject

to selection by the consultant, <u>the compression environment set up by Gentile as</u>

<u>modified by Queiroz and Hiroshi however does not explicitly suggest</u> that there is a

display enabling a user / consultant to select one of the plurality of compression modes /

factors [balancing the compression factors of 1 - compression ratio or size, 2 -

computational complexity or speed, and 3 - visual quality or picture quality] in

accordance with a type of the region / text, graphic, photograph.

Litwiller discloses a display unit that displays compression choices and having

the user [similar to Gentile's consultant] select on the user touching screen display the

compression parameter (see Litwiller, [0061], [0065], and [0067]).

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to further modify Gentile, as modified by Quieroz and Hiroshi,

using Litwiller's teachings by including a display unit to Gentile's device/method in order

to allow Gentile's [as modified by Quieroz and Hiroshi] compression environment to be

displayed in order to enhance the selection process by allowing the user or consultant

to touch the touch-sensitive display to provide a compression selection (see Litwiller,

[0061], [0065], and [0067]).

As to claim 6, the discussions are addressed with respect to claim 1. Further,

Gentile's object / text, graphic and photograph or any combination which is a

component of the document file / page representation in a page description language /

text, graphic and photograph or any combination is similar to the image data consisting

of a character region, a graphic region, and a photograph region of claim 1.

As to claims 2-4, the discussions are addressed with respect to claim 5.

As to claims 7-11, the claims are the corresponding method claims to claims 1-5

respectively. The discussions are addressed with regard to claims 1-5. Gentile further

discloses the processors for performing image processing steps (see Gentile, e.g.

Figure 1).

As to claims 12-16, the claims are the corresponding computer-readable medium

claims to claims 1-5 respectively. The discussions are addressed with regard to claims

1-5.

As to claim 40, the discussions are addressed with respect to claim 5 [e.g. the

best performance for the speed mode is the highest processing speed, the best

performance for the picture quality mode is the least picture quality deterioration, and

the best performance for the size preference mode is the highest compression ratio].

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-

1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every

other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bhavesh M Mehta/
Supervisory Patent Examiner, Art Unit 2624
/Bernard Krasnic/
June 17, 2009